CLAIMS

What is claimed is:

1. A refrigerant cycle comprising:

a compressor;

an outdoor heat exchanger;

a main expansion device;

an indoor heat exchanger;

a valve for selectively providing a refrigerant from said compressor to said outdoor heat exchanger in cooling mode, or to said indoor heat exchanger in a heating mode; and

a pair of economizer taps, with a first of said economizer taps being positioned between said outdoor heat exchanger and said main expansion device, and a second economizer tap being positioned between said indoor heat exchanger and said main expansion device, and there being economizer expansion devices and valves positioned on each of said first and second taps and with a first and second economizer heat exchanger, with one positioned adjacent to each of said economizer expansion device and valves.

2. A refrigerant cycle as set forth in Claim 1, wherein said economizer heat exchangers include economizer heat exchangers positioned on each of said first and second taps, and downstream of respective ones of said economizer expansion devices and valves.

3. A refrigerant cycle as set forth in Claim 2, wherein an economizer return line is positioned on a line communicating said first and second economizer heat exchangers, and communicating refrigerant from said first and second taps back to said compressor.

4. A method of operating a refrigerant cycle comprising the steps of:

(1) providing a valve for selectively communicating a refrigerant from a compressor to a outdoor heat exchanger, or to an indoor heat exchanger, dependent on whether the refrigerant system is in a cooling or heating mode, providing a tap line for tapping refrigerant to provide an economizer function both downstream from said outdoor heat exchanger in a cooling mode and downstream from said indoor heat exchanger in a heating mode and providing separate economizer heat exchangers for both said cooling mode and said heating mode; and

(2) determining that an economizer mode is desirable, and passing a tapped refrigerant into one of said economizer heat exchangers, and cooling a main refrigerant flow in said one of said economizer heat exchangers, with a second of said economizer heat exchangers being provided with a valve to block flow of said tapped refrigerant.

5. A method of operating a refrigerant cycle as set forth in claim 4, wherein said valve of step (1) is provided with a control, and a valve system to achieve step (2) is also controlled by such control, with said control of said valve of steps (1) and (2) being controlled simultaneously to achieve either cooling or heating mode, combined with economized operation.